

Unit 1 Test Review  
AP Physics

1. Vectors:
  - a. Graphical (head-to-tail) addition method.
  - b. Algebraic (components) addition method.
  - c. Sine-cosine-tangent to break vector into components (triangles!).
2. Motion graphs:
  - a. Displacement v. time.
  - b. Velocity v. time.
  - c. Acceleration v. time.
  - d. Relationship between the three types of motion graphs.
3. One-Dimension:
  - a. Variables (units): Time (seconds: s), displacement (meters: m), initial velocity (meters per second: m/s), final velocity (m/s), acceleration (meters per second squared: m/s/s).
  - b. Equations.
  - c. Free-fall.
4. Two-Dimensions:
  - a. Same variables as One-Dimension, except in both the x- and y-directions.
  - b. Vectors:
    - i. Head-to-tail addition method.
    - ii. Components addition method.
    - iii. Sine-cosine-tangent to break vector into components (triangles!).
  - c. Projectile Motion:
    - i. No acceleration in x-direction.
    - ii. Free-fall in y-direction.
    - iii. Use multiple kinematics equations to find required variable(s).
    - iv. Break velocities into triangles to find initial or final x- and y-velocities.